

HARD CARBON FILMS FORMED FROM PLASMA TREATED POLYMER SURFACES

ABSTRACT

Hard-carbon films with unique structures, methods for producing the films, and articles coated by the films are provided. These hard-carbon films are synthesized by the plasma surface treatment of a polymer substrate or a polymer-coated substrate in a plasma containing SF_x species, where x is less than 6, and may be produced under room temperature, low pressure environments.